

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A system for responding to destination failures involving SPVx (switched-permanent virtual circuit) connections comprising:

a primary source node;

a primary source switch for producing an SPVx connection, the primary source node in communication with the primary source switch;

a primary destination node;

a primary destination switch for receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node;

an alternate destination node, the primary destination switch redirecting automatically the primary connection to the alternate destination node along an alternate path when the primary destination switch detects a failure of the primary path, the alternate path formed by the primary source node and the alternate destination node only after the primary path experiences a failure, the primary destination switch releases the SPVx connection after there is a fault detected on the

primary path, the primary source switch makes multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path, the primary source switch redirects automatically the SPVx connection to the alternate destination node, the primary source switch re-establishes the SPVx connection to the primary destination node when the failure condition clears.

Claims 2-5 (canceled)

Claim 6 (currently amended): A system for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising:

a primary source node;

a primary source switch for producing an SPVx connection, the primary source node in communication with the primary source switch;

a primary destination node;

a primary destination switch for receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node; [[and]]

an alternate source switch; and

an alternate source node in communication with the alternate source switch, the alternate source switch re-establishing automatically the connection to the primary destination node along

an alternate path when the primary source switch detects a failure of the primary path, the alternate path formed by the alternate source node and the primary destination node only after the primary path experiences a failure, the primary source switch in communication with the alternate source switch to identify to the alternate source switch there is a failure in regard to the primary path, the alternate source switch re-establishes the SPVx connection from the primary source node to the primary destination node when the failure clears.

Claims 7 and 8 (canceled)

Claim 9 (currently amended): A system as described in Claim [[7]] 6 wherein the alternate source switch re-establishes the SPVx connection from the alternate source node to the primary destination node when a link between the primary source node and the primary source switch fails.

Claim 10 (currently amended): A system as described in Claim [[7]] 6 wherein the alternate source switch re-establishes the SPVx connection from the alternate source node to the primary destination node when the primary switch fails.

Claims 11 and 12 (canceled)

Claim 13 (currently amended): A system as [[a]] described in Claim 10 wherein the primary source node re-establishes the SPVx connection from the primary source node to the primary destination node if the failure has cleared.

Claims 14-21 (canceled)

Claim 22 (currently amended): A method for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising the steps of:

forming an SPVx connection between a primary source node and a primary destination node;

detecting a failure on a primary path having the primary source node; [[and]]

communicating between a primary source switch in communication with the primary source node and an alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node;

re-establishing automatically the SPVx connection with the alternate source node along an alternate path having the primary destination node [[.]]; and

re-establishing the SPVx connection from the primary source switch to the primary destination node after the failure has cleared.

Claim 23 (canceled)

Claim 24 (currently amended): A method as described in Claim [[23]] 22 wherein the re-establishing step includes the step of re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source node fails.

Claim 25 (original): A method as described in Claim 24 wherein the re-establishing step includes the step of re-establishing the SPVx connection from the alternate source node to the

primary destination node when a link between the primary source node and the primary source switch fails.

Claim 26 (currently amended): A method as described in Claim ~~[[23]]~~ 22 wherein the re-establishing step includes the step of re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source switch fails.

Cancel Claims 27-36.

Claim 37 (currently amended): A method for responding to failures of connections in a network comprising the steps of:

establishing a single end-to-end connection across a network between a primary source node and a primary destination node with multiple re-route options;

experiencing a failure in the connection; ~~[[and]]~~

re-routing the connection across the network between the primary source node and an alternate destination node along one of the multiple re-route options by maintaining just one end-to-end connection between the primary source node and the primary destination node~~[[.]]~~;

trying to restore the SPVx connection with the primary destination node; and

re-establishing the end-to-end connection through the primary source switch when the failure clears.

Claim 38 (original): A method as described in Claim 37 wherein the experiencing step includes the step of detecting a failure in the primary destination node; and the re-routing step includes the step of redirecting automatically the connection to an alternate destination node.

Claim 39 (original): A method as described in Claim 38 wherein the detecting step includes the step of detecting a failure of the primary destination node.

Claim 40 (original): A method as described in Claim 39 including the step of releasing the SPVx connection by the primary destination node.

Claim 41 (original): A method as described in Claim 40 wherein the redirecting step includes the step of redirecting automatically by the primary source node the SPVx connection to the alternate destination node.

Cancel Claim 42.

Claim 43 (currently amended): A method as described in Claim ~~[[42]]~~ 41 including the step of configuring failure codes that trigger a redirection of the SPVx connections.

Claim 44 (original): A method as described in Claim 43 including the steps of making multiple attempts to reestablish the connection with the primary destination node.

Claim 45 (original): A method as described in Claim 37 wherein the experiencing step includes the step of detecting a failure on a primary path having the primary source node and the re-routing step includes the step of redirecting automatically the connection along an alternate path having the primary destination node.

Claim 46 (original): A method as described in Claim 45 including the step of communicating between a primary source switch in communication with the primary source node and a alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node.

Claim 47 (original): A method as described in Claim 46 wherein the re-establishing step includes the step of re-establishing the connection from the alternate source node to the primary destination node when the primary source node fails.

Claim 48 (original): A method as described in Claim 46 wherein the re-establishing step includes the step of re-establishing the connection from the alternate source node to the primary destination node when a link between the primary source node and the primary source switch fails.

Claim 49 (original): A method as described in Claim 46 wherein the re-establishing step includes the step of re-establishing the connection from the alternate source node to the primary destination node when the primary source switch fails.

Claims 50-52 (canceled)

Claim 53 (new): A system for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising:

a primary source node;

a primary source switch for producing an SPVx connection, the primary source node in communication with the primary source switch;

a primary destination node;

a primary destination switch for receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node;

an alternate source switch;

an alternate source node in communication with the alternate source switch, the alternate source switch re-establishing automatically the connection to the primary destination node along an alternate path when the primary source switch detects a failure of the primary path, the alternate path formed by the alternate source node and the primary destination node only after the primary path experiences a failure, the primary source switch in communication with the alternate source switch to identify to the alternate source switch there is a failure in regard to the primary path, the alternate source switch re-establishes the SPVx connection from the alternate source node to the primary destination node when the primary switch fails; and

a network, and wherein the alternate source switch re-establishes the SPVx connection from the primary source switch to the primary destination node through the alternate source switch and a primary portion of the alternate path through the network when a primary portion of the primary path through the network fails.

Claim 54 (new): A system for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising:

a primary source node;

a primary source switch for producing an SPVx connection, the primary source node in communication with the primary source switch;

a primary destination node;

a primary destination switch for receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node;

an alternate source switch;

an alternate source node in communication with the alternate source switch, the alternate source switch re-establishing automatically the connection to the primary destination node along an alternate path when the primary source switch detects a failure of the primary path, the alternate path formed by the alternate source node and the primary destination node only after the primary path experiences a failure, the primary source switch in communication with the alternate source switch to identify to the alternate source switch there is a failure in regard to the primary path; and

a network, and wherein the alternate source switch re-establishes the SPVx connection from the alternate source switch to the primary source switch to the primary destination node

through a primary portion of the primary path through the network when the primary source node fails and a primary portion of the alternate path through the network fails.

Claim 55 (new): A method for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising the steps of:

forming an SPVx connection between a primary source node and a primary destination node;

detecting a failure on a primary path having the primary source node;

communicating between a primary source switch in communication with the primary source node and an alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node;

re-establishing automatically the SPVx connection with the alternate source node along an alternate path having the primary destination node; and

re-establishing the SPVx connection from the primary source switch through the alternate source switch to the primary destination node through a primary portion of the alternate path of a network when a primary portion of the primary path through the network fails.

Claim 56 (new): A method for responding to failures involving SPVx (switched-permanent virtual circuit) connections comprising the steps of:

forming an SPVx connection between a primary source node and a primary destination node;

detecting a failure on a primary path having the primary source node;

communicating between a primary source switch in communication with the primary source node and an alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node;

re-establishing automatically the SPVx connection with the alternate source node along an alternate path having the primary destination node; and

re-establishing the SPVx connection from the alternate source switch through the primary source switch to the primary destination node through a primary portion of the primary path when the primary source fails and a primary portion of the alternate path through the network fails.

Claim 57 (new): A method for responding to failures of connections in a network comprising the steps of:

establishing a single end-to-end connection across a network between a primary source node and a primary destination node with multiple re-route options;

experiencing a failure in the connection including the step of detecting a failure on a primary path having the primary source node;

communicating between a primary source switch in communication with the primary source node and a alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node; and

re-routing the connection across the network along one of the multiple re-route options by maintaining just one end-to-end connection between the primary source node and the primary destination node including the step of redirecting automatically the connection along an alternate path having the primary destination node.

Claim 58 (new): A method for responding to failures of connections in a network comprising the steps of:

establishing a single end-to-end connection across a network between a primary source node and a primary destination node with multiple re-route options;

experiencing a failure in the connection including the step of detecting a failure on a primary path having the primary source node;

communicating between a primary source switch in communication with the primary source node and a alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node; and

re-routing the connection across the network along one of the multiple re-route options by maintaining just one end-to-end connection between the primary source node and the primary destination node including the step of re-establishing the connection from the alternate source switch to the primary source switch to the primary destination node through a primary portion of

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the primary path when the primary source node fails and a secondary portion of the alternate path through the network fails.